

2011 TEP Implementation Plan

Stakeholder Meeting

October 8th, 2010

Agenda



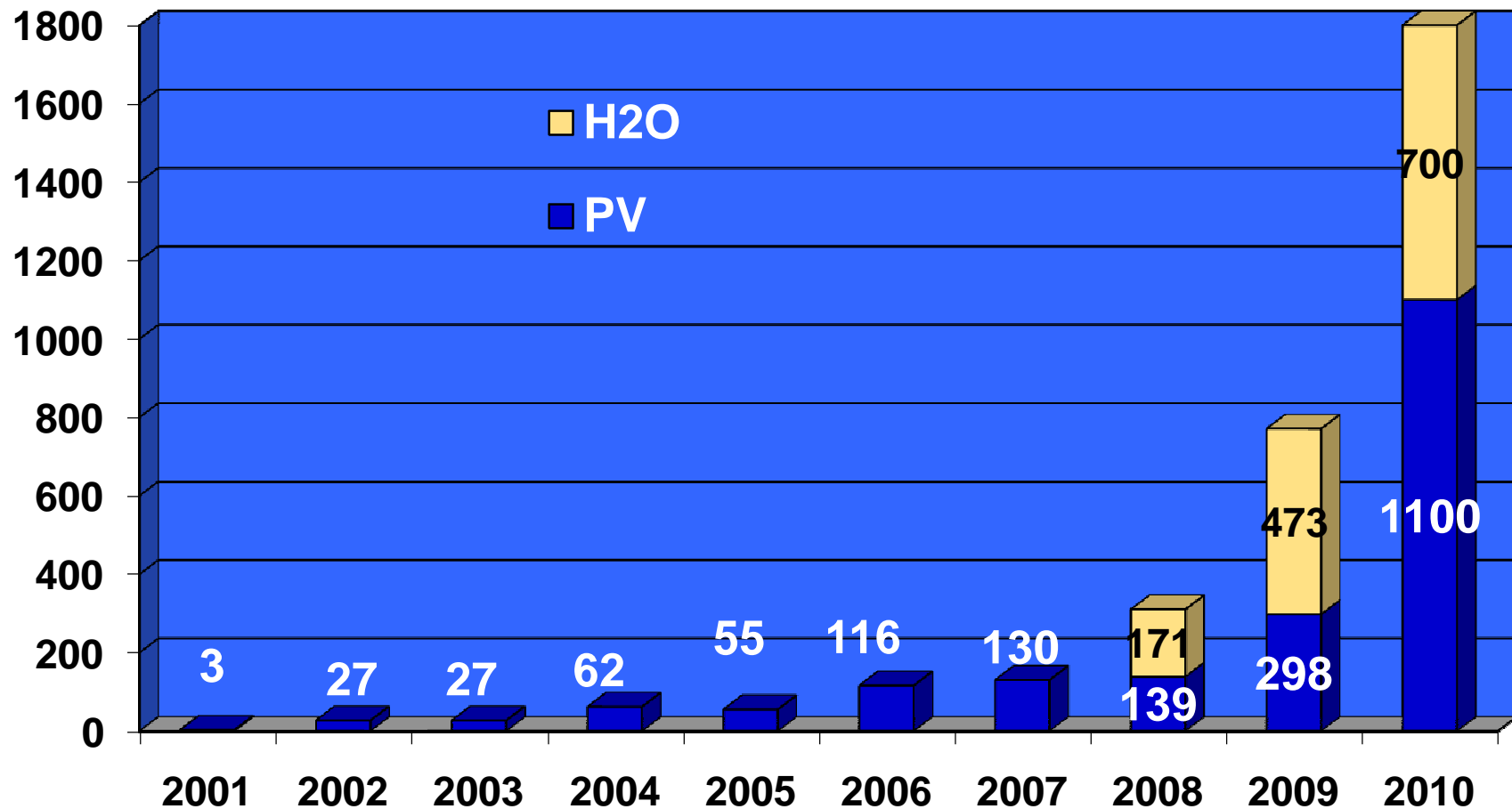
- Overview of YTD Program
- Utility Scale
- Distributed Generation Plan for 2011
 - Residential Incentives and buckets
 - Commercial Incentives and buckets
 - School Program
- R&D
- Discussion

Overview of Results

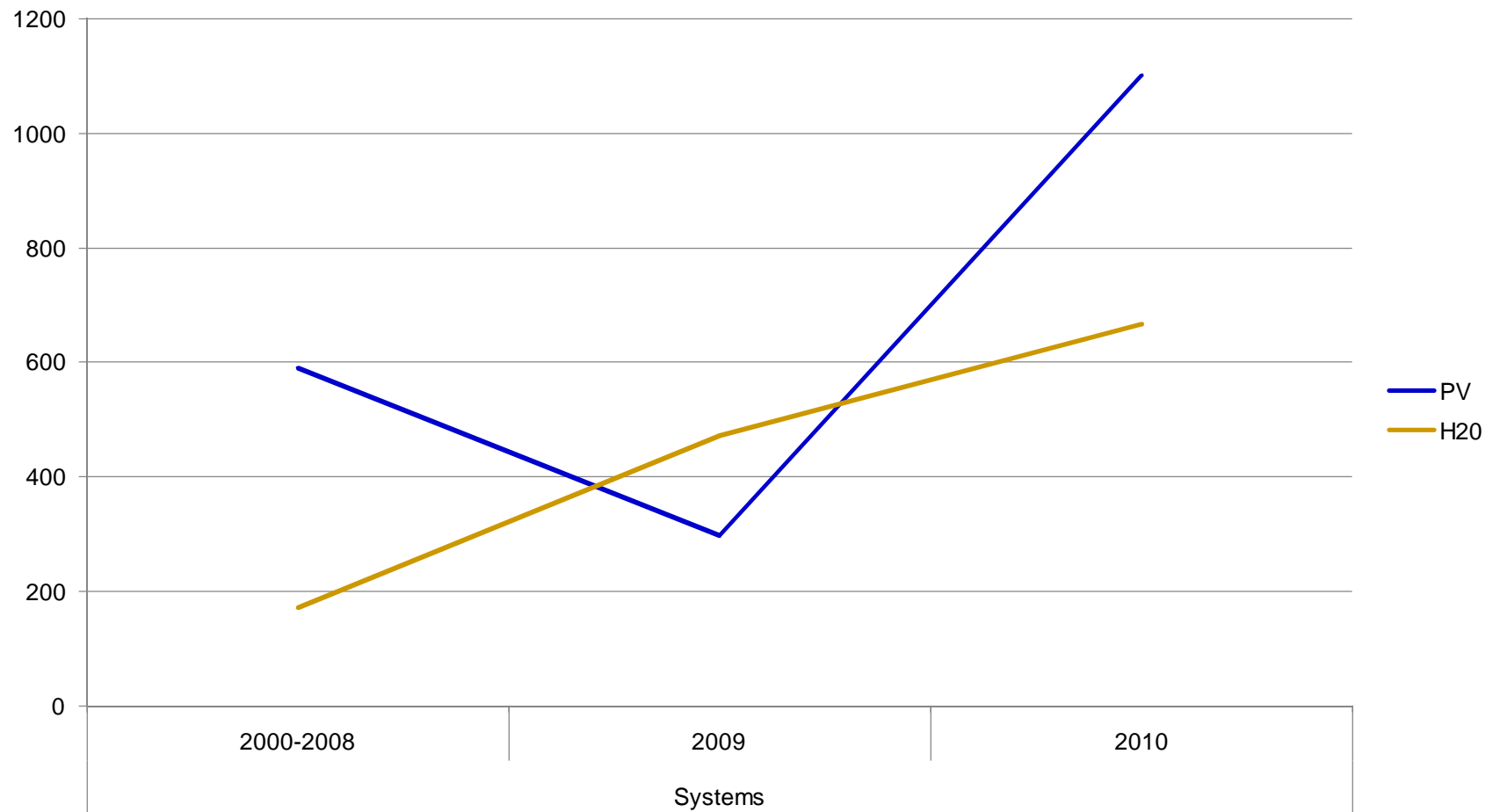


- 2009 overview
 - 298 Residential PV installs
 - 473 solar H₂O installs
 - 13 MW of commercial PBI
 - Utility Scale requirement met: 5MW Springerville, landfill gas, and short-term purchases
- 2010 Trend
 - 1,100 Residential PV installs (conservative)
 - 667 H₂O installs
 - Q1: Reserved \$4.5 M of \$19.5 available
 - YTD as of 4/20/2010: \$6.3 M reserved
 - Same as 2009

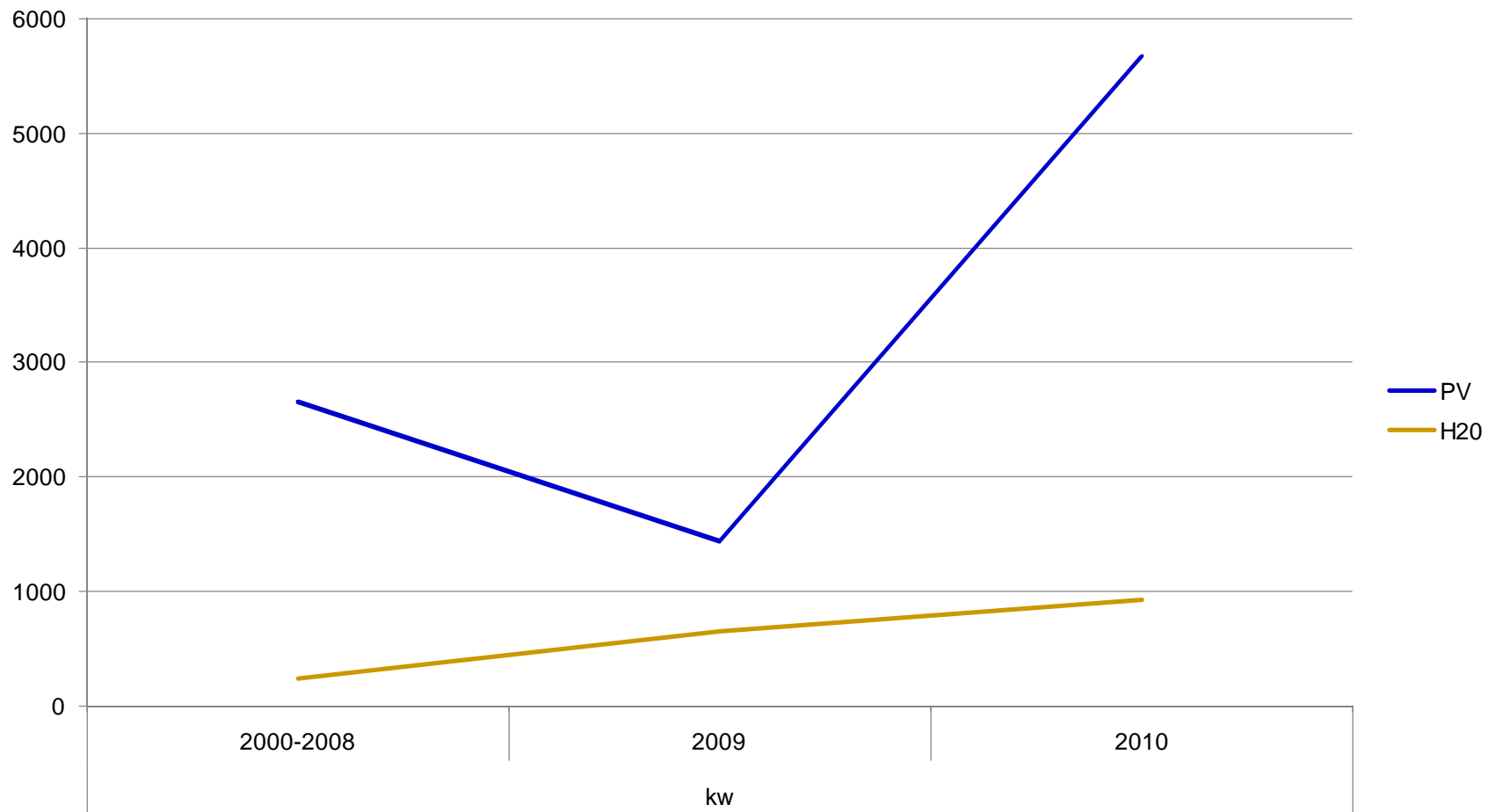
Residential Systems by Year



Res Systems Installed



kW Installed



Utility Solar Scale



- 60 MW of renewable generation capacity by end of 2011
 - 45 MW PPAs
 - 15 MW TEP Owned
- 155 MW total by end of 2012
 - 105 MW Solar
 - 50 MW Wind
 - Enough for compliance through 2016

Utility Scale Projects



Project	Capacity MW	Annual MWh	Technology	Expected In-Service Date	TEP Owned
SGS Solar	4.6	8,500	Fixed PV	Operational	Yes
Total Existing	4.6	8,500			
Future Renewable Generation					
Fotowatio Renewable Ventures	20	53,700	SAT PV	2012	No
SGS Solar Expansion	1.8	3,300	Fixed PV	2011	Yes
OLON Community Solar	1.6	4,100	SAT PV	2010	Yes
Renewable Fuel LLC (Bell IPC)	5.5	17,600	Solar Thermal	2012	No
Sexton Energy	2.2	15,400	Bio-Mass	2013	No
Torch Renewable Energy, LLC	50	133,300	Wind	2012	No
CTC (First Light, LLC)	5	9,900	Fixed PV	2011	No
NRG Solar	25	57,800	Fixed PV	2011	No
Avalon Solar	35	64,400	Fixed PV	2012	No
ANS/EMCORE Solar	1.5	3,400	CPV	2012	No
Amonix Solar	1.5	4,100	CPV	2011	No
Amonix Solar	12	32,500	CPV	2011	No
Foresight Solar	4	10,200	SAT PV	2012	No
Foresight Solar	12	30,700	SAT PV	2012	No
Total Future	177.1	440,400			
Bright Tucson Solar Buildout Plan					
Solon Solar	10	25,000	SAT PV	2011 - 2012	Yes
TBD	10	25,000	TBD	2013 - 2014	Yes
Total Future - BTSBP	20	50,000			8
Total TEP Owned Projects	26.2	65,900			

Residential DG Program



- Up front incentive
 - Separate technology buckets
 - PV and other solar water heating
 - Starting @ \$2.00 in Q1 PV
 - 60% trigger by 6/30/2011 to \$1.75
 - Hot water unchanged \$750 + \$0.25/kWh up to \$1750
 - End pilot Solar GHP at the extra 50 cents per watt

Commercial DG Program



- Up front incentive
 - Separate technology buckets
 - PV and other (solar water heating, etc...)
 - MW and/or dollar target range
 - \$1.50/watt PV
 - Hot Water UFI increase in size limit to 400,000 kWh
- Performance Based incentive
 - Price is max REC by size
 - Bidding timeframes by size (monthly, quarterly)
 - MW and/or dollar target range
 - 100 – 500kw = \$0.12, 500kw – 1 MW = \$0.105, 1 MW + = \$0.08
- School Program
 - Small PV system with job training

Research and Development



- Test Yard
- AzRise
- Studies
 - EPRI, High Penetration (circuit, system), DG impacts

Estimated 2011 Budget



- Purchased Power - \$6.7 M
- Res DG
 - \$14.4 M (528 H₂O systems, 1131 6 kW PV systems)
- Small Commercial DG
 - \$3.8 M (32 H₂O systems, 57 40kW PV systems)
- PBI Large Commercial
 - \$380 k (3.2 M kWh, 1.9 MW)
- Total DG - \$26.6 M

Estimated 2011 Budget



- FIT Pilot - \$450 k
- Technical Training - \$736 k
- IT - \$600 k
- Metering - \$800 k
- Reporting and Admin - \$588 k
- R&D - \$1,080,000

- Total - \$37.6 M

Discussion



Thank you for participating!!